

Abstract of the Disclosure

Methods of forming solder ball contacts having dimensions of approximately 2.5 microns in diameter for use in C4-type connections. The methods form solder ball contacts using selective deposition of solder on metal contact pads of a device.

5 The metal contact pads have exposed portions at the bottom of through holes. The through holes define the dimensions of the exposed portions of the metal contact pads, and serve to limit the dimensions of the resulting solder contact by limiting the area upon which deposition preferentially occurs. Subsequent reflow of the deposited solder forms a solder ball contact. Various devices, modules, systems and

10 other apparatus utilizing such methods of forming solder ball contacts.